Animal models and natural products to investigate in vivo and in vitro antidiabetic activity

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Abstract

Diabetes mellitus is a chronic disease which has high prevalence. The deficiency in insulin production or impaired insulin function is the underlying cause of this disease. Utilization of plant sources as a cure of diabetes has rich evidence in the history. Recently, the traditional medicinal plants have been investigated scientifically to understand the underlying mechanism behind antidiabetic potential. In this regard, a substantial number of in vivo and in vitro models have been introduced for investigating the bottom-line mechanism of the antidiabetic effect. A good number of methods have been reported to be used successfully to determine antidiabetic effects of plant extracts or isolated compounds. This review encompasses all the possible methods with a list of medicinal plants which may contribute to discovering a novel drug to treat diabetes more efficaciously with the minimum or no side effects.

Keywords

Author Keywords: Animal model; Diabetes; Medicinal plants; Flavonoids; Diabetes mechanisms
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